1994

The effect of family status on academic achievement and program selection.

Linda. Jared
University of Windsor

NOTICE

The quality of this microform is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Reproduction in full or in part of this microform is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30, and subsequent amendments.

AVIS

La qualité de cette microforme dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

La reproduction, même partielle, de cette microforme est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30, et ses amendements subséquents.

Canada

THE EFFECT OF FAMILY STATUS ON ACADEMIC ACHIEVEMENT AND PROGRAM SELECTION

by

Linda Jared

A Thesis
Submitted to the Faculty of Graduate Studies and Research
through the Faculty of Education in
Partial Fulfillment of the Requirements for the
Degree of Master of Education at the
University of Windsor

Windsor, Ontario, Canada

ISBN 0-315-93277-5

Canada

*Name: [illegible]

Dissertation Abstracts International is arranged by broad, general subject categories. Please select the one subject which most nearly describes the content of your dissertation. Enter the corresponding four-digit code in the spaces provided.

SOCIOLOGY OF EDUCATION

SUBJECT TERM

C 3 4 0

SUBJECT CODE

UMI

Subject Categories

THE HUMANITIES AND SOCIAL SCIENCES

COMMUNICATIONS AND THE ARTS

- Architecture 0729
- Art History 0377
- Cinema 0900
- Dance 0378
- Fine Arts 0357
- Information Science 0723
- Journalism 0391
- Library Science 0399
- Mass Communications 0708
- Music 0413
- Speech Communication 0459
- Theater 0465

EDUCATION

- General 0515
- Administration 0514
- Adult and Continuing 0516
- Agricultural 0517
- Art 0273
- Bilingual and Multicultural 0282
- Business 0688
- Community College 0275
- Curriculum and Instruction 0727
- Early Childhood 0518
- Elementary 0524
- Finance 0277
- Guidance and Counseling 0519
- Health 0680
- Higher 0745
- History of 0520
- Home Economics 0278
- Industrial 0521
- Language and Literature 0279
- Mathematics 0280
- Music 0522
- Philosophy of 0998
- Physical 0523
- Psychology 0525
- Reading 0535
- Religious 0527
- Sciences 0714
- Secondary 0533
- Social Sciences 0534
- Sociology of 0340
- Special 0529
- Teacher Training 0530
- Technology 0710
- Tests and Measurements 0288
- Vocational 0747

LANGUAGE, LITERATURE AND LINGUISTICS

- Language
  - General 0679
  - Ancient 0289
  - Linguistics 0290
  - Modern 0291
- Literature
  - General 0401
  - Classical 0294
  - Comparative 0295
  - Medieval 0297
  - Modern 0298
  - African 0316
  - American 0591
  - Asian 0305
  - Canadian (English) 0352
  - Canadian (French) 0355
  - English 0593
  - Germanic 0311
  - Latin American 0312
  - Middle Eastern 0315
  - Romance 0313
  - Slavic and East European 0314

PHILOSOPHY, RELIGION AND THEOLOGY

- Philosophy 0422
- Religion
  - General 0318
  - Biblical Studies 0321
  - Clergy 0319
  - History of 0320
  - Philosophy of 0322
- Theology 0469

SOCIAL SCIENCES

- American Studies 0323
- Anthropology
  - Archaeology 0324
  - Cultural 0326
  - Physical 0327
- Business Administration
  - General 0310
  - Accounting 0272
  - Banking 0770
  - Management 0454
  - Marketing 0338
- Canadian Studies 0385
- Economics
  - General 0501
  - Agricultural 0503
  - Commerce-Business 0505
  - Finance 0508
  - History 0509
  - Labor 0510
  - Theory 0511
- Folklore 0358
- Geography 0366
- Gerontology 0351
- History
  - General 0578
  - Ancient 0579
  - Medieval 0581
  - Modern 0582
  - Black 0328
  - African 0331
  - Asia, Australia and Oceania 0332
  - Canadian 0334
  - European 0335
  - Latin American 0336
  - Middle Eastern 0333
  - United States 0337
- History of Science 0585
- Law 0398
- Political Science
  - General 0615
  - International Law and Relations 0616
  - Public Administration 0617
- Recreation 0814
- Social Work 0452
- Sociology
  - General 0626
  - Criminology and Penology 0627
  - Demography 0938
  - Ethnic and Racial Studies 0631
  - Individual and Family Studies 0628
  - Industrial and Labor Relations 0629
  - Public and Social Welfare 0630
  - Social Structure and Development 0700
  - Theory and Methods 0344
- Transportation 0709
- Urban and Regional Planning 0999
- Women's Studies 0453

THE SCIENCES AND ENGINEERING

BIOLOGICAL SCIENCES

- Agriculture
  - General 0473
  - Agronomy 0285
  - Animal Culture and Nutrition 0475
  - Animal Pathology 0476
  - Food Science and Technology 0359
  - Forestry and Wildlife 0478
  - Plant Culture 0479
  - Plant Pathology 0480
  - Plant Physiology 0817
  - Range Management 0777
  - Wood Technology 0746
- Biology
  - General 0306
  - Anatomy 0287
  - Biostatistics 0308
  - Botany 0309
  - Cell 0379
  - Ecology 0329
  - Entomology 0353
  - Genetics 0369
  - Limnology 0793
  - Microbiology 0410
  - Molecular 0307
  - Neuroscience 0317
  - Oceanography 0416
  - Physiology 0433
  - Radiation 0821
  - Veterinary Science 0778
  - Zoology 0472
- Biophysics
  - General 0786
  - Medical 0760

EARTH SCIENCES

- Biogeochemistry 0425
- Geochemistry 0996
- Geodesy 0370
- Geology 0372
- Geophysics 0373
- Hydrology 0388
- Mineralogy 0411
- Paleobotany 0345
- Paleoecology 0426
- Paleontology 0418
- Paleozoology 0985
- Palynology 0427
- Physical Geography 0368
- Physical Oceanography 0415

HEALTH AND ENVIRONMENTAL SCIENCES

- Environmental Sciences 0768
- Health Sciences
  - General 0566
  - Audiology 0300
  - Chemotherapy 0992
  - Dentistry 0567
  - Education 0350
  - Hospital Management 0769
  - Human Development 0758
  - Immunology 0982
  - Medicine and Surgery 0564
  - Mental Health 0347
  - Nursing 0569
  - Nutrition 0570
  - Obstetrics and Gynecology 0380
  - Occupational Health and Therapy 0354
  - Ophthalmology 0381
  - Pathology 0571
  - Pharmacology 0419
  - Pharmacy 0572
  - Physical Therapy 0382
  - Public Health 0573
  - Radiology 0574
  - Recreation 0575
  - Speech Pathology 0460
  - Toxicology 0383
- Home Economics 0386

PHYSICAL SCIENCES

Pure Sciences

- Chemistry
  - General 0485
  - Agricultural 0749
  - Analytical 0486
  - Biochemistry 0487
  - Inorganic 0488
  - Nuclear 0738
  - Organic 0490
  - Pharmaceutical 0491
  - Physical 0494
  - Polymer 0495
  - Radiation 0754
- Mathematics 0405
- Physics
  - General 0605
  - Acoustics 0986
  - Astronomy and Astrophysics 0606
  - Atmospheric Science 0608
  - Atomic 0748
  - Electronics and Electricity 0607
  - Elementary Particles and High Energy 0798
  - Fluid and Plasma 0759
  - Molecular 0609
  - Nuclear 0610
  - Optics 0752
  - Radiation 0756
  - Solid State 0611
- Statistics 0463

Applied Sciences

- Applied Mechanics 0346
- Computer Science 0984
- Engineering
  - General 0537
  - Aerospace 0538
  - Agricultural 0539
  - Automotive 0540
  - Biomedical 0541
  - Chemical 0542
  - Civil 0543
  - Electronics and Electrical 0544
  - Heat and Thermodynamics 0348
  - Hydraulic 0545
  - Industrial 0546
  - Marine 0547
  - Materials Science 0794
  - Mechanical 0548
  - Metallurgy 0743
  - Mining 0551
  - Nuclear 0552
  - Packaging 0549
  - Petroleum 0765
  - Sanitary and Municipal 0554
  - System Science 0790
- Geotechnology 0428
- Operations Research 0796
- Plastics Technology 0795
- Textile Technology 0994

PSYCHOLOGY

- General 0621
- Behavioral 0384
- Clinical 0622
- Developmental 0620
- Experimental 0623
- Industrial 0624
- Personality 0625
- Physiological 0989
- Psychobiology 0349
- Psychometrics 0632
- Social 0451

ABSTRACT

THE EFFECT OF FAMILY STATUS ON ACADEMIC ACHIEVEMENT AND PROGRAM SELECTION

by

Linda Jared

A biographical questionnaire and a scripted interview were administered to a homogeneous group of grade nine students. Chi square analyses showed that the characteristics of the adults in the home did not differ greatly among students from intact, blended and single-parent families. Using analysis of variance, it was found that there was no significant effect of family status on academic achievement as measured by semester-end marks, or on program selection. There was no interaction of student gender, family status and course marks. The results show that differences in academic achievement among students are not based on family status alone, but are mediated by other variables.

I would like to thank my advisor, Dr. J. Meyer for his guidance and support throughout this project. I am particularly grateful for his enthusiasm for acting as an electronic professor. Working as a distance-education student would not have been easy without the use of modern technology.

The staff at the school which was the site of my research have been a tremendous help. The principal helped to shape the project and smoothed several bumpy roads. The counsellors went above and beyond the call of duty in conducting scripted interviews of all of the subjects. Without the assistance of homeroom teachers in collecting consent forms and administering surveys, none of this would have been possible.

My sister, Dr. Debra Jared provided invaluable advice as this work progressed. I am thankful for her critical analyses of the early drafts of this thesis, which helped me to focus my writing.

Finally, I would like to thank my husband and my son for their unwavering love, patience and support. I couldn't have done it without you!

TABLE OF CONTENTS

LIST OF TABLES

INTRODUCTION

The goal of this study is to investigate the relationship between family status and academic achievement. The population being studied is a culturally homogeneous group of grade nine students attending one high school in a medium-sized city on Ontario. The specific objective of this study is to answer the following questions:

1. Does family status have an effect on academic achievement of grade nine students?
2. Does family status have an effect on grade nine students' choice of level of difficulty of program?
3. Do family status and gender interact to have an effect on academic achievement of grade nine students?

Grade nine students were selected as the subjects of this study for two reasons. Firstly, they are the most homogeneous age group of students in the high school, as students are retained with their age-group peers up to their grade nine year. Secondly, major changes to the grade nine program are being implemented across the province of Ontario. As a result, there is a great need among teachers, counsellors and administrators for information leading to a greater understanding of the factors which impact on the academic achievement of these students.

Since the 1960's, there have been increases in the number of separated, divorced, re-married, co-habiting and single parents in North America. As a result, large numbers of children live in non-intact families. Devereaux (1990) reports that in 1986, 14% of all children in Canada were members of single-parent families. In 1961, the corresponding number was 6%. In 1975 the Toronto Board of Education conducted a survey of over 8000 grade 9 students. At that time, 78.5% of the students surveyed lived with both of their parents. In a parallel survey conducted in 1980 the proportion of students living with both parents was 73.2%,(Wright & Dhanota, 1981). In 1987, 65% of all secondary students in the Toronto Board of Education were living with both parents, (Cheng, Tsuji,

Yau, & Ziegler, 1989). That number had dropped to 63% as of 1991 (Brown, Cheng, Yau, & Ziegler, 1992).

There is a growing public perception that these changes in family life are having a detrimental impact on children. There may be many factors in the lives of children which are affected by their family status. Whitehead (1993), citing an un-named 1988 survey by the National Center for Health Statistics, indicates increased rates of poverty, emotional and behavioral problems, teenage pregnancy, drug abuse, and sexual abuse as some of the consequences of life in non-intact families. Valpy (1993) describes the difficult job that Canadian schools have in dealing with students from "a vast range and variety of bruised, stressed, and fragile families."

If it is true that children in non-intact families are harmed by their family situation, then the potential impact on the education system is enormous. The focus of the present work is the effect of family status on the academic achievement of students.

There are many terms used to describe the various types of families which now exist in Canada. Some of these, such as "broken home," may well be considered pejorative. For the purpose of this work, the following definitions will be used.

Intact family: a family which includes two natural parents.

Non-intact family: any of several family configurations which do not include two natural parents.

Single-parent family: a family headed by one parent, male or female

Blended family: a family in which the natural parent has remarried or is co-habiting with a new partner.

LITERATURE REVIEW

The literature which exists on the topic of family status and academic achievement may be categorized on the basis of how the family is defined. This literature is summarized in Table 1.

Comparison of One-Parent and Two-Parent Families

Kraig (1989) found that there were no significant differences in results on the California Test of Basic Skills between students in one- and two-parent families. This hopeful result is in conflict with the majority of the literature.

Barrington (1985), in a comprehensive review of the literature to 1984, concluded that the research overwhelmingly suggests that negative effects on academic achievement are seen in children whose parents divorce. Research conducted since that time supports this conclusion.

Shreeve and his team (1985) studied 201 students in grades 7-12. The population they described was relatively homogeneous with respect to socio-economic status, race and culture. Because many other factors vary with race and culture, working with a homogeneous population helped to eliminate sources of variation. This research found that students from single-parent homes had lower grade point averages (GPA's) and lower scores on the California Achievement Tests than did students with two parents in the home. These authors drew dramatic conclusions from their results (the report is titled "Single Parents and School Achievement: A National Tragedy"), although they did not report any statistical analysis of their data. The results presented did indicate that there may be differences in achievement among children of various family backgrounds, but not enough work was done with the data to support a firm conclusion.

In addition to the lack of statistical analyses, there is a fundamental flaw in the design of this study. The work compared children in one-parent families to children in two-parent families. Those students who lived in divorced, reconstituted (blended)

Table 1: Summary of literature on family status and academic achievement.

Family Types	Author(s)	Findings
One-Parent and Two-Parent	Kraig (1989)	No significant differences (standardized tests)
	Shreeve et al (1985)	Students from single-parent homes had lower GPA's and lower scores on achievement tests
	Milne, Meyers, Rosenthal & Ginsburg (1986)	Students in two-parent families had higher scores in reading and math (standardized tests)
Father-Present and Father-Absent	Taylor (1986)	Number of parents had no effect on overall achievement, but presence of father in either family type helped math scores (standardized tests)
	Mulkey & Morton (1991)	Girls from male-absent homes had higher math and science scores (standardized tests)
Intact and Non-intact Families	Frymier (1992)	Students with low scores more likely to not live with both parents (standardized tests)
	Touliatos, Lindholm & Rich (1978)	Students in intact families had higher scores (standardized tests)
	Chalker & Horns (1988)	Grade 5 children from intact families had higher reading scores (standardized tests)
Intact and Divorced Single-Parent Families	Guidubaldi, Cleminshaw, Perry &Mcloughlin (1983)	Intact-family children performed better (standardized tests and teacher measured)
Intact, Blended, and Single-Parent Families	Boyd & Parish (1985)	Students from intact families performed better (standardized tests and GPA's)
	Allison & Furstenberg (1989)	Students who had experienced marriage dissolution were worse off academically (teacher-reported)

families were treated in the same way as those in two-natural-parent families. Doing so obscures any effects of divorce which might be long-lasting. It requires a leap of faith to assume that remarriage of the custodial parent completely negates any effect on the children of the breakdown of the biological family. McKie (1993) argues that an episode of single-parenthood, even if followed by subsequent remarriage, has a long-lasting effect on the family members involved.

Results similar to those found by Shreeve et. al. were reported by Milne, Meyers, Rosenthal and Ginsburg (1986), who studied a major database of American students. Upon examining information from 2 700 participants in grades 10 and 12, it was found that students from two-parent families had higher scores on reading and math achievement tests than did students from one-parent families. These authors also compared all students in one-parent families to all of those in two-parent families, ignoring any effects resulting from membership in a blended family.

Consideration of Gender in One-Parent and Two-Parent Families

Several researchers have considered parental gender when investigating the differences between children from one- and two-parent homes. Taylor (1986) studied a group of eighth-grade students. She found that the number of parents in the household had no significant effect on overall academic achievement, as measured by standardized tests. However, she did find that the presence of a father (whether in a one- or two-parent family) did have a significant positive impact on math scores for both boys and girls.

The distribution of subjects in Taylor's study makes it difficult to support any strong conclusions comparing one- and two-parent families. The research included only 53 students from two-parent families, as opposed to 247 students from one-parent families. Taylor gave no consideration to the background of the two-parent families, again ignoring the potential impact of prior separation, divorce or widowhood. An additional flaw in Taylor's reporting of her results is that the sum of the numbers of

subjects of each family type does not equal the stated total number of subjects. This error makes the subsequent statistical analyses somewhat suspect.

In contrast to Taylor's results, Mulkey and Morton (1991) determined that girls from male-absent homes had significantly higher science scores on standardized tests than those from homes with a male parent. Once again, blended families were combined with the intact families, obscuring any lasting effects of divorce and subsequent remarriage.

Comparison of Intact and Non-Intact Families

It is clear that any research which does not distinguish between intact and blended families is missing a crucial element. A number of studies attempt to address this problem by separating those children living in intact families from all others. A broad study of students in grades 4, 7, and 10 sponsored by Phi Delta Kappa found that students with low achievement scores in reading were more likely to not live with both biological parents (Frymier, 1992). No further information is given as to the family status of those students were not living with both biological parents.

Touliatos, Lindholm, and Rich (1978) surveyed 637 elementary school age children from grades 3-6 within a racially homogeneous group. Children who were living with both natural parents had higher scores on the California Achievement Tests than those who were not. There are two flaws in the work of Touliatos, Lindholm, and Rich. One is that students in blended families were analyzed together with students in single-parent families. It is a leap of faith to assume that there are no differences between families with one biological parent, and those with a biological parent plus a step-parent. A second problem is that the children were of a range of ages. Children change dramatically from grade 3 to grade 6. In combining this range of ages of students there is no consideration of any differences which might occur as children develop.

This problem was addressed in a similar study by Chalker and Horns (1988). They studied 119 Alabama school children in grades 2 through 5. In contrast to

Touliatos, Lindholm, and Rich. Chalker and Horns looked at the children from each grade level individually. These children were divided into two groups: intact families, and single-parent or blended families. They found that only the children in grade 5 exhibited a significant interaction between family status and reading score on the Stanford Achievement Test. Chalker and Horns hypothesized that family situation has a cumulative impact on children, becoming more significant as they get older. This cumulative effect could have a serious impact on children as they reach high school. It must be noted that Chalker and Horns had only 26 grade 5 students in their study, and thus any inference drawn from their research is tenuous. However, their results do indicate that basing research on mixed-age students may mask some important findings.

Comparison of Intact and Divorced Single-Parent Families

Guidubaldi, Cleminshaw, Perry and Mcloughlin (1983) avoided the problem of how to classify blended families by ignoring them completely in their analysis of 699 first-, third-, and fifth-grade students. The participants in their study were roughly equally from two-natural-parent and divorced single-parent families. Intact family children performed better on both standardized and teacher-reported measures of reading and math. Within the group of children from divorced single-parent families, an "increase in academic difficulty" was found for boys and older children. This suggests that both age and gender play a role in determining the effect of parental separation and divorce on the academic achievement of children. Clarke-Stewart (1989) discussed why divorce may be harder on boys than on girls, suggesting that it is more often boys who lose their role model and authority figure.

A major disadvantage of the work of Guidubaldi et al. is that an important group of students were excluded. Hetherington (1989) reported that 80% of divorced men and 75% of divorced women remarry. According to her data, 25% of children spend some

time in a step-parent family. Eliminating this group of students from the research leaves a large question mark on the interpretation and application of the results.

Intact, Blended and Single-Parent Families

None of the research described thus far has considered the blended-family child as distinct from either the single-parent or intact family child. The following works do make this distinction.

Boyd and Parish (1985) divided their subjects into three groups: students from intact homes, student from divorced, non-remarried homes, and students from divorced, reconstituted homes. In this research, both achievement test scores and grade point averages were collected. A number of significant findings were reported. Students from divorced, reconstituted homes and divorced, non-remarried homes had comparable scores on standardized tests of reading and math. These scores were lower than those of students from intact families. A different result was obtained when the GPA's of these students were compared. Students from intact and divorced, reconstituted homes had comparable GPA's, which were higher than those of students in divorced, non-remarried homes. These differences between standardized test scores and GPA's indicate that the method of determining academic achievement is a factor which must be considered. Boyd and Parish described their subjects as being from elementary and secondary schools, but an exact distribution of ages or grade levels was not reported. As a result, any age-specific effects are not identified.

Allison and Furstenberg (1989) divided their 1200 subjects into the three groups used by Boyd and Parish. Allison and Furstenberg found that students who had experienced a marriage dissolution were significantly worse off with respect to academic performance than those who had not. However, there was virtually no difference between those students whose custodial parent had remarried and those whose custodial parent remained single. In contrast to Clarke-Stewart (1989) and Guidubaldi et al.

(1983). Allison and Furstenberg found that girls were more strongly affected by divorce than were boys, whether or not their custodial parent remarried.

The children studied by Allison and Furstenberg ranged in age from 7 to 11 years. Given that age has been found to be an important factor in post-divorce success (e.g. Chalker & Horns, 1988; Guidubaldi et al., 1983) the range in age of the subjects is a significant uncontrolled variable in this work.

THE PRESENT STUDY

The objective of the present study was to investigate the effect of family status on academic achievement among students attending high school in Ontario. Based on this review of the literature, the present study to determine whether family status has an effect on academic achievement had the following distinguishing characteristics:

- The students were a homogeneous group with respect to age, race, culture and socioeconomic status.
- The subjects were divided into three groups: intact families, single-parent families, and blended families.
- The gender of the student was considered.

For secondary school students in the province of Ontario, two further factors must be considered. These are (a) level of difficulty of program, and (b) measurement of academic achievement.

Level of Difficulty

Students in Ontario schools select the level of difficulty of their program. This choice of level has traditionally been made prior to the start of grade 9, which is the first year of high school in Ontario. This choice of level will change as schools implement the Common Curriculum program mandated by the Ministry of Education. Beginning in the 1993-94 school year, students will enter grade 9 as one class. They will choose a level of difficulty for entry into grade 10.

Basic level courses involve development of personal skills and preparation for the world of work. General level courses are considered appropriate preparation for employment or further study at a community college. Advanced level courses focus on development of academic skills and preparation for college or university. (Ontario Ministry of Education, 1989).

Some of the justification for the development and implementation of the Common Curriculum program in Ontario has centered around the claim that disproportionate numbers of children from non-traditional families select programs at the basic or general level. This argument is supported by the Ontario-based research of King (1986) which indicates that while 80% of students in advanced level courses live with both parents, the same is true for only 66% of students in basic level courses. In addition, it has been argued that the existing structure perpetuates differences in social classes among children, including those which result from family status (Curtis, Livingstone & Smaller, 1992).

Measures of Achievement

Much of the reviewed literature involves use of standardized tests to measure achievement. This is perhaps valid in areas where similar tests are used to determine entry into colleges and universities. In Ontario, the measure of academic performance which is generally used for university entry is the semester-end mark generated by the classroom teacher. As indicated earlier in this literature review, Boyd and Parish (1985) have shown that classroom marks and scores on standardized tests do not always correspond. These differences between standardized test scores and GPA's indicate that the method of determining academic achievement is a factor which must be considered. To produces results which would be relevant to Ontario students, the classroom mark was used in the present research design.

As a result of these feature of the Ontario school system, two further characteristics were included considered in the design of the study:

- The level of difficulty of the students' program was included.
- The measure of academic achievement was relevant to the students being studied.

The research described in the present work considers these five factors in investigating the effect of family status on the program choice and academic achievement of grade nine students.

METHOD

Subjects

The subjects were 85 grade 9 students who volunteered to participate in this study. All of the subjects were in their first year of high school. Fifty of the subjects (59%) were enrolled in an advanced level program, 15 in a general level program (18%), and 20 in a mixed general/advanced program (23%). Eighty four of the students were born in Canada, one was born in the United States. All but one student reported speaking English as a main language at home.

The students all attended one school which had approximately 1200 students. The school follows a semester system. The entire grade nine class consisted of 223 students who were in grade 9 for the first time. Of the 223 students, 49% were enrolled in an advanced level program, 28% were in general level, and 23% had selected a mixed program (see Table 2).

Table 2: Distribution of students in advanced, general and mixed-level programs.

Program	Subjects In Study	Entire Grade 9 Class
Advanced Level	59% (50)	49% (110)
General Level	18% (15)	28% (62)
Mixed	23% (20)	23% (51)

Student program levels were chosen by the students in the spring of the previous year. The grade eight teacher made a recommendation to the student and parents based on the student's academic performance in grade eight. Students with marks above 75% were recommended for advanced level, students with marks in the 50-70% range were

advised to follow a general level program. A mixed program reflecting individual strengths was recommended to a student in the 70-75% range. Students with marks less than 50% were advised to enroll in a basic level program. The final decision was ultimately left to the parents and student. If the grade eight teacher had serious concerns about the program chosen by the student, a consultation between the parent, student and a high school counsellor was scheduled. Counsellors report being called in on such a consultation infrequently, less than once per year. (R. Farina, personal communication, September 14, 1993).

The school serves the central core of a city of 75 000, as well as several outlying suburban and rural areas. There are few members of visible minorities in the school, and the majority of the students speak English as their first language.

Collection of Data

A two-part biographical survey developed by the author was used to collect data from the subjects (see Appendix A). The first part of the survey requested general information about the student, and the second part consisted of questions about the adults in the students' home. A further list of questions was designed to elicit more detailed information about the school-family interaction. These questions appeared in the Scripted Interview Form (see Appendix B). During the time that this research was conducted, all of the secondary teachers of the school board were under a work-to-rule sanction. As a result, it was not possible to pre-test the survey and interview at a different school.

Procedure

With the assistance of the homeroom teachers, an informed consent letter (Appendix C) was distributed to each grade 9 student in the school. Of the 233 students who were eligible to participate in the study, 85 (36.5%) returned consent letters signed by a parent or guardian allowing them to participate. Only two parents explicitly refused

to allow their student to participate, the remainder of the forms were not returned to the teacher.

Each student participating in the research completed the biographical survey during their homeroom period. These questionnaires were administered simultaneously by all homeroom teachers.

For all participating students, final grades in each of the compulsory subjects of grade 9 (English, French, geography, math and science) were obtained from school records. These records also indicated the level at which the course was taken.

During the course of routine spring interviews, the school guidance counsellors completed a Scripted Interview Form for each subject.

RESULTS

The Subjects and Their Families

Eighty five students participated in this study. Fifty of these students (59%) lived in an intact family with their natural mother and father. Thirty five students (41%) lived in non-intact families. Of the students in non-intact families, 13 were living in single parent families, 18 were in blended families, three had families with two adoptive parents and one was living in a group home. The majority of the single-parent homes were female-headed, only three students lived with just their father. All but one of the blended families consisted of the natural mother and a new male partner, one family had the natural father and a step-mother.

Statistical Analyses

Two types of statistical tests were uses to analyze the data which were collected. One set of tests involved comparing two groups of students, such as those from intact and non-intact families. In order to determine whether the groups differed in the relative distribution of observations among the different categories, a non-parametric technique, the chi-square test, was used (McCall, 1975). The second statistical method which was used was analysis of variance. This technique allowed the determination of interaction between factors (such as gender and family status) , as well as differences among the levels of a factor (McCall, 1975).

Biographical Survey and School Records

As a result of the sensitivity of the analysis of variance technique to large differences in sample size, the initial analyses were performed using two student groups: those with an intact two-natural-parent family (n=50), and those with all other types of family (n=35). The analyses were then repeated with only those students from the non-intact families. The students in the non-intact families were classified as being members of either blended (n=18) or single-parent (n=13) families. The four students who did not live with either natural parent were omitted from the comparison of blended and single-parent families. Seven students who did not have a mark in one of the five core subjects were omitted from the analyses of variance which included the course mark, as theses analyses cannot be performed when information is missing.

Comparison of Intact and Non-Intact Families

General characteristics of the subjects and their families. The biographical survey asked the students to provide information about themselves and their families. More female subjects (n=50) than male subjects (n=35) from both types of families participated in the research (see Table 3).

Table 3: Distribution of students of each gender in intact and non-intact families.

Gender	Intact Families	Non-Intact Families
Female	54% (27)	66% (23)
Male	46% (23)	34% (12)

The intact families had slightly more children ($\underline{M}$ = 2.04) living in the home than did the non-intact families ($\underline{M}$ = 1.94), although the difference was not significant $\chi^2(3, \underline{n}=84)=3.44$, $\underline{p}>.05$. (See Table 4.)

Table 4: Distribution of students in intact and non-intact families of different sizes.

Children in Family	Intact Families	Non-Intact Families
1	18% (9)	32% (11)
2	42% (21)	44% (15)
3	34% (17)	21% (7)
4	6% (3)	3% (1)

Note: One student from a non-intact family lives in a group home. This student has been omitted from this table.

Tables 5-7 describe the characteristics of the adult s living in the homes of the students. Table 5 contains the highest completed education level of the adults in the home.

Table 5: Distribution of students having an adult of given education living in their home.

	Intact Families		Non-Intact Families	
Education Level	**Male Adults**	**Female Adults**	**Male Adults**	**Female Adults**
Primary	6% (3)	4% (2)	3% (1)	6% (2)
Secondary	26% (13)	30% (15)	31% (11)	34% (12)
Post-Secondary	50% (25)	52% (26)	11% (4)	40% (14)
Not Reported	18% (9)	14% (7)	26% (9)	11% (4)
Adult Not Present	0	0	29% (10)	9% (3)

Table 6 displays the work status of the adults in the intact and non-intact homes.

Table 6: Distribution of students having an adult of given employment status living in their home.

	Intact Families		Non-Intact Families	
Employment Status	**Male Adults**	**Female Adults**	**Male Adults**	**Female Adults**
Full Time	74% (37)	40% (20)	45% (16)	31% (11)
Part Time	8% (4)	38% (19)	0	29% (10)
Not Working/ Reported	18% (9)	22% (11)	26% (9)	31% (11)
Adult Not Present	0	0	29% (10)	9% (3)

The percentage of adults in each of several occupation types is presented in Table 7.

Table 7: Distribution of students having an adult of given occupation level living in their home.

	Intact Families		Non-Intact Families	
Occupation	**Male Adults**	**Female Adults**	**Male Adults**	**Female Adults**
Clerical, Service, Labour	10% (5)	30% (15)	9% (3)	43% (15)
Trade, Technical	32% (16)	18% (9)	9% (3)	3% (1)
Management, Professional	34% (17)	16% (8)	26% (9)	9% (3)
Self Employed, Other	16% (8)	22% (11)	11% (4)	14% (5)
No Occupation Reported	8% (4)	14% (7)	17% (6)	23% (8)
Adult Not Present	0	0	28% (10)	9% (3)

Note: When more than one occupation was indicated, the occupation requiring the highest skill level was used.

Chi square analyses were performed on the raw data. The adult-not- present cells were excluded because the adult-not-present cell is empty by definition for intact families. For adult females, the two types of families did not differ with respect to education level, $\chi^2(3, n=82)=0.84$, $p>.05$, work status, $\chi^2(2, n=82)=1.53$, $p>0.05$, and occupation, $\chi^2(4, n=82)=7.39$, $p>.05$. For adult males, the two types of families also did not differ in work status, $\chi^2(2, n=75)=4.49$, $p>0.05$, and occupation type, $\chi^2(4, n=75)=5.91$, $p>0.05$. However, a significant difference was found between the education levels of the adult males who were present in the intact and non-intact families,

$\chi^2(3, n=75)=9.05, p<0.05$ The students in intact families were more likely to know the education level of the male in their home, and more of these males had post-secondary education than in non-intact families.

Students who completed the survey were asked to provide their postal code. Statistics Canada publishes income information grouped by the first three characters of the postal code (Statistics Canada, 1989), which are known as the forward sortation area or FSA. (see Table 8). As a result, postal code can be used as a very rough indicator of family economic status.

Table 8: Median total income of tax filers in the forward sortation areas (FSA's) represented by the students in this study.

Number Of Students In FSA	Median Income Male Tax Filers ($)	Median Income Female Tax Filers ($)
6 227 400 (Ontario)	24 800	13 000
34	22 900	9 400
24	36 400	10 100
10	32 800	12 300
5	30 900	8 800
2	37 700	12 400
2	29 400	10 300
2	25 600	9 900
1	35 300	11 000
1	29 400	10 600

The provincial median income for male tax filers is $24 800, for female tax filers it is $13 000. Forty percent of the students live in FSA's where the median income for

male tax filers is lower than the provincial median. One hundred percent of the students live in FSA's where the median income of female tax filers is lower than the provincial median.

A chi-square analysis was used to determine whether there was a significant relationship between family type and neighbourhood income level. This analysis indicated that students from intact families did not live in higher income level neighbourhoods than students from non-intact families, $\chi^2(9, N=85)=9.80$, $p>0.05$.

Relationship of family type and program. School records were used to determine the level at which each student completed the five core credits of the grade nine program. Fifty students completed all credits at the advanced level, 15 had all of their credits at the general level, and 20 had a mixture of both advanced and general level credits (see Table 9).

Table 9: Distribution of students in intact and non-intact families enrolled in each program type.

Program Level	Intact Families	Non-Intact Families
Advanced	60% (30)	57% (20)
General	18% (9)	17% (6)
Mixed	22% (11)	26% (9)

A chi square analysis was used to determine whether there was a relationship between the family type and the student program. This analysis indicated that student program was independent of family type, $\chi^2(2, N=85)=0.16$, $p>.05$.

A summary of the chi-square analyses comparing intact and non-intact families is presented in Table 10.

Table 10: Summary of chi-square analyses of differences among intact and non-intact families.

Family Characteristic	Significant Difference Found
Education level of the adult female	No
Education level of the adult male	Yes
Work status of the adult female	No
Work status of the adult male	No
Occupation of the adult female	No
Occupation of the adult male	No
Neighbourhood income level	No
Student program selection	No

Relationship of family type, program and subject marks. The mean percentage marks achieved by students from intact and non-intact families are presented in Table 11.

Table 11: Mean percentage marks of students in five courses.

	Advanced Level		General Level	
Subject	**Intact Families**	**Non-Intact Families**	**Intact Families**	**Non-Intact Families**
English	69	69	65	61
French	76	74	67	72
Geography	75	70	67	50
Math	73	73	65	62
Science	72	67	65	60

An analysis of variance was performed to determine whether students from intact families attained higher marks in their courses than students from non-intact families. Because students complete their credits at different levels, marks alone are meaningless without considering program level. Fifty students completed all of their core courses at the advanced level, and 15 completed an all general level program. The 20 subjects with mixed programs were assigned to a program on the basis of their level in English, as the choice of level in English has a greater impact on future course selections than does the choice of level in any other subject. Fourteen mixed-program students were designated as advanced level, and six as general level.

There were three factors in the analysis: family type (intact versus non -intact), program (advanced versus general), and course (English, French, geography, math,

science). Family type and program were treated as between-subjects factors, course was treated as a within-subjects variable.

There was no significant main effect of family type on the subjects' marks, $F(1,74)=2.01, p>0.05$. **There was a significant main effect of program type on marks, $F(1,74)=11.09, p<.005$.** The mean marks of students in the advanced level (72%) were significantly higher than the mean marks of students in the general level (63%). **There was also a significant main effect of course on marks, $F(4,296)=6.67, p<.0001$.** Within this analysis of variance, Tukey's tests were used to investigate differences among the individual marks, revealing that marks in French were significantly higher than those in English, geography and science (all p's< .01).

There was no significant interaction between family type and program, $F(1,74)=0.19, p>0.05$. Subjects in the advanced level had higher marks than subjects in the general level, regardless of family type. **There was a significant interaction between family type and course, $F(4,296)=5.57, p<.01$.** More specifically, simple main effects tests showed a significant effect of family type on geography marks $F(1,158)=12.38, p<.001$, but no effect of family on marks in the other four subjects, (all p's > .10). **There was a significant interaction of program and course, $F(4,296)=3.12$, $p<.05$.** This interaction was caused primarily by a large effect of program type on geography marks.

The triple interaction (family type, program and subjects' marks) was also significant, $F(4,296)=2.78, p<.05$. When the mean marks are compared, it can be seen that this was caused by a large effect of family type for students in general level geography. The mean mark for general level geography students from intact homes was 67%, and the mean mark for general level geography students from non-intact homes was 50%, a difference of 17%. However, it must be noted that only six students from non-intact homes were enrolled in general level geography. The mark of 25% obtained by one of these students is likely the cause of this significant result. The difference in mean

marks between students from intact families and students from non-intact families is less than six percent for all other comparisons.

A summary of the results of the analysis of the interaction among family type, program, course, and marks for students in intact and non-intact families is presented in Table 12.

Table 12: Summary of the analysis of interaction among family type, program, course and marks for students in intact and non-intact families.

Interaction Analyzed	**Significant Interaction Found**
Family Type & Marks	No
Program & Marks	Yes
Course & Marks	Yes
Family Type, Program & Marks	No
Family Type, Course & Marks	Yes
Program, Course & Marks	Yes
Family Type, Program, Course & Marks	Yes

Comparison of Single-Parent and Blended Families

General characteristics of the subjects and their families. The students from non-intact families were further classified according to the number and type of adults in their homes. Blended families (n=18) were those with one natural parent and one other adult. Single-parent families (n=13) had one natural parent and no other adult. The four students with non-intact families of other descriptions were omitted from these analyses due to their small numbers.

More female students than male students from both types of families participated in the research (see Table 13).

Table 13: Distribution of students of each gender in blended and single-parent families.

Gender	Blended Families	Single-Parent
Female	83% (15)	54% (7)
Male	17% (3)	46% (6)

The blended families had slightly more children (M = 2.05) living in the home than did the single-parent families (M = 1.92), although the difference was not significant, $\chi^2(3, n=31)=0.75$, $p>.05$ (see Table 14).

Table 14: Distribution of students in blended and single-parent families of different sizes*.

Children in Family	Blended Families	Single-Parent
1	28% (5)	31% (4)
2	44% (8)	46% (6)
3	22% (4)	23% (3)
4	6% (1)	0

Tables 15-17 describe the characteristics of the adults living in the homes of the students. The percentage of adults who have completed elementary, secondary and post-secondary education is presented in Table 15.

Table 15: Distribution of adults of given education in blended and single-parent families.

	Blended Families		Single - Parent	
Education Level	**Male Adults**	**Female Adults**	**Male Adults**	**Female Adults**
Primary	6% (1)	0	0	15% (2)
Secondary	44% (8)	50% (9)	23% (3)	15% (2)
Post-Secondary	11% (2)	39% (7)	0	46% (6)
Not Reported	39% (7)	11% (2)	0	0
Adult Not Present	0	0	77% (10)	23% (3)

Table 16 includes the work status of the adults in the home. Table 16 displays the occupation of the adults.

Table 16: Distribution of adults of given employment status in blended and single-parent families.

	Blended Families		Single - Parent	
Employment Status	**Male Adults**	**Female Adults**	**Male Adults**	**Female Adults**
Full Time	61% (11)	18% (3)	15% (2)	31% (4)
Part Time	0	39% (7)	0	15% (2)
Not Working/Not Given	39% (7)	33% (6)	8% (1)	31% (4)
Adult Not Present	0	0	77% (10)	23% (3)

Table 17: Distribution of adults having given occupation level in blended and single-parent families.

	Blended Families		Single - Parent	
Occupation	**Male Adults**	**Female Adults**	**Male Adults**	**Female Adults**
Clerical, Service, Labour	17% (3)	50% (9)	0	31% (4)
Trade, Technical	39% (7)	6% (1)	8% (1)	0
Management, Professional	0	6% (1)	15% (2)	8% (1)
Self Employed, Other	17% (3)	17% (3)	0	15% (2)
No Occupation Reported	28% (5)	22% (4)	0	23% (3)
Adult Not Present	0	0	77% (10)	23% (3)

Note: When more than one occupation was indicated, the occupation requiring the highest skill level was used.

Chi-square analyses were performed on the raw data for adult females. The adult-not- present cells were excluded because the adult-not-present cell is empty by definition for blended families. For adult females, the two types of families did not differ with respect to education, $\chi^2(3, n=28)=6.80$, $p>.05$, work status, $\chi^2(2, n=28)=1.09$, $p>.05$ and occupation, $\chi^2(4, n=28)=1.07$, $p>0.05$. With 77% of the single-parent families missing an adult male, no meaningful analysis could be made comparing the males in the single-parent and blended families.

When the non-intact families ($n=31$) were analyzed by specific type, no dependence was found between family type and neighbourhood income level, $\chi^2(7, n=31)=5.58$, $p>0.05$.

Relationship of family type and program. Twenty-four students were in an advanced level program, seven were in general level, (see Table 18).

Table 18: Distribution of students in blended and single-parent families enrolled in each program type.

Program Level	Blended Families	Single-Parent
Advanced	78% (14)	77% (10)
General	22% (4)	23% (3)

Students with mixed programs were classified on the basis of their level in English. A chi square analysis indicated that student program was independent of family type, $\chi^2(1, n=31)=0.00$, $p>0.05$.

A summary of the analyses of the differences between single-parent and blended families is presented in Table 19.

Table 19: Results of chi-square analyses of differences between single-parent and blended families.

Family Characteristic	Significant Difference Found
Education level of the adult female	No
Work status of the adult female	No
Occupation of the adult female	No
Neighbourhood income level	No
Student program selection	No

Relationship of family type, program and subject marks. The mean percentage marks achieved by students from blended and single-parent families are presented in Table 20. An analysis of variance was performed to determine whether students from blended families attained higher marks in their courses than students from single-parent families. There were three factors in the analysis: family type (blended versus single-parent), program (advanced versus general), and course (English, French, geography, math, science). Family type and program were treated as between-subjects factors, course was treated as a within-subjects variable.

Table 20: Mean percentage marks of students in five courses.

	Advanced Level		General Level	
Subject	**Blended Families**	**Single Parent**	**Blended Families**	**Single Parent**
English	69	69	61	57
French	72	79	77	60
Geography	69	74	57	39
Math	72	72	60	53
Science	67	69	58	53

There was no significant main effect of family type on the subjects' marks, $F(1,21)=0.42, p>0.05$. **There was a significant main effect of program type on marks, $F(1,21)=5.96, p<.05$.** The mean marks of students in the advanced level (71%) were significantly higher than the mean marks of students in the general level (57%). **There was also a significant main effect of course on marks, $F(4,84)=6.13, p<.0005$.** Tukey's tests revealed that marks in French were significantly higher than those in all other subjects (all p's< .05).

In all subjects, general level students from single-parent families had lower marks than general level students from blended families. However, the interaction of family type and program was not statistically significant, $F(1,74)=0.19, p>0.05$. Subjects in the advanced level had higher marks than subjects in the general level, regardless of family type. There was no significant interaction between family type and course, $F(4,84)=0.314, p>.05$. **There was a significant interaction of program and course, $F(4,84)=2.61, p<.05$.** This interaction was caused primarily by a large effect of program type on geography marks.

The triple interaction (family type, program, subject) was not significant, $F(4,84)=1.69, p>.05$. However, the mean marks for single-parent general level students were lower than those of all others for every course.

A summary of the results of the analysis of the interaction among family type, program, course, and marks for students in single-parent and blended families is presented in Table 21.

Table 21: Summary of the analysis of interaction among family type, program, course and marks for students in blended and single-parent families.

Interaction Analyzed	**Significant Interaction Found**
Family Type & Marks	No
Program & Marks	Yes
Course & Marks	Yes
Family Type, Program & Marks	No
Family Type, Course & Marks	No
Program, Course & Marks	Yes
Family Type, Program, Course & Marks	No

The Effect of Gender

Analysis of variance was used to determine whether student gender interacted significantly with either family status or course marks. There were three factors in the analysis: family type (intact versus non -intact), student gender, and course (English, French, geography, math, science). Family type and gender were treated as between-subjects factors, course was treated as a within-subjects variable. The proportions of students from intact and non-intact families were the same in the advanced and general level programs. As a result, the data could be collapsed across program.

Intact and Non-Intact Families.

There was no significant main effect of gender on the subjects' marks, $F(1,74)=0.01, p>0.05$. There was no significant interaction of family type and gender, $F(1,74)=1.19, p>0.05$. There was no significant interaction of gender and subject, $F(4,74)=0.95, p>0.05$. The triple interaction was not significant, $F(4,296)=0.68, p>.05$.

Single-Parent and Blended Families.

There was no significant main effect of gender on the subjects' marks, $F(1,24)=0.01, p>0.05$. There was no significant interaction of family type and gender, $F(1,24)=0.01, p>0.05$. There was no significant interaction of gender and subject, $F(4,24)=0.75, p>0.05$. The triple interaction was not significant, $F(4,96)=0.75, p>.05$.

The Scripted Interview

The students interviewed indicated that their school work was important to their families. Only three students said that school work was not important. One of these students was from an intact family, one from a blended family and one from a single-parent family.

Students described a number of family variables which affected their attitudes towards school (see Table 22).

Table 22: Tabulation of the factors cited by students as affecting their attitudes towards school.

Factor Cited	Number of Students Encouraged	Number of Students Discouraged
Parental Expectations	38	6
Lack of Encouragement	-	5
Want to do Better than Parents	11	-
Sibling Relationships	6	10
Want Family to be Proud	5	-
Family Conflict	-	3

The factors cited most frequently (n=38) as encouraging students to become better students were parent interest, encouragement, and expectations. Six students said that

high parental expectations were discouraging to them and five students indicated that lack of encouragement was a problem. Eleven students indicated that they were motivated by wanting to do better than their parent(s) who had poor education. Sibling relationships helped six students be better students, but discouraged ten. Five students cited wanting their family to be pleased or proud as being a source of motivation. Family status did not show up as causing a pattern on any of these responses. Family conflict was described as discouraging by three students. Two of these students were from intact families, and one from a single-parent family.

Students listed a number of sources of help in choosing their grade ten program. For all students, the counsellor was the person listed most often in this discussion. In intact families, the mother was cited 50% more frequently than the father. In non-intact families, the mother was cited more than twice as often as the father. Not a single student mentioned a step-parent or mother's boyfriend as a source of advice.

When help with homework was discussed, in intact families both parents were cited approximately equally. In non-intact families, the mother was mentioned three times as frequently as the father. A higher proportion of students in non-intact families indicated that their siblings were of assistance, or that they received no assistance. Only one student indicated that a step-parent helped with homework.

DISCUSSION

Major Findings

Does family status have an effect on academic achievement of grade nine students? The results of this study indicate that there was no significant effect of family status on academic achievement. There was an effect of family status on course marks for only one subject, geography. When the actual data are examined, this result can be attributed to an extremely low mark obtained by one student in a cell with a low number of students. It is not likely to have any educational significance.

Does family status have an effect on grade nine students' choice of level of program? The results of this study indicate that family status had no effect on the program choice of grade nine students.

Do family status and student gender interact to have an effect on academic achievement of grade nine students? There was no interaction of family status and gender affecting academic achievement.

The fact that family status does not appear to have an effect on academic achievement may be due to the fact that the characteristics of the members of intact, blended and single-parent families were found to be very similar. The adults who are actually present in these families do not differ with respect to education, occupation and work status. However, these adults (in particular males) are not present in one third of the non-intact families. Any impact that the adults have as role models may be very different in intact and non-intact families.

There are no differences in the program choices among students in intact and non-intact families. One reason for this may be that the father plays a limited role in assisting students with course choices in all families. Within the intact families, the mother was involved in the selection of grade 10 courses 50% more frequently than the father. As a result, the absence of a father may not make a significant difference in this area for many students.

There is no doubt that the number of children living in non-intact families has increased over the past two decades. When much of the existing literature was written, (Barrington 1985, Guidubaldi et al., 1983, Touliatos, et al., 1978) living in a non-intact family was less common than it is today. When family break-up was less common, it is possible that the families which separated had more extreme problems. In addition, adolescents have a tremendous need to "fit in". Being from an unusual family construction would not satisfy this need. These two factors could have contributed to prior research results which indicated that non-intact families were detrimental to student achievement.

With the publication of research indicating that students in non-intact families were at risk, many jurisdictions began to build social programs aimed at helping these families. At the same time, their numbers have increased and living in a non-traditional family has become a more normal situation for children. As these support programs have been put into place, and as being from a non-intact family has become more common, the differences between students from intact and non-intact homes have diminished.

The area in which this study was conducted is a stable community. The families have better access to social services than they would in a rapidly expanding neighbourhood. The use of English as the main language in the homes of all but one student indicates that language would not be a barrier to access to social services. The non-transient nature of the area might allow for more possibility of contact with the extended family and non-custodial parent than exists in other communities.

Future Studies

For students with both parents still living it is difficult to evaluate the effect of the non-custodial parent. The scripted interviews conducted in this work indicate that there is a wide variation in the frequency and type of involvement of the non-custodial parent.

A more detailed investigation of the relationship between the student and the non-custodial parent may reveal a significant effect.

One factor which could not be investigated in a study this size are the differences among mother-custody, father-custody, and joint-custody families. The numbers of children in the latter two situations are increasing as the courts use broader criteria in evaluating custody cases. As a result, it is becoming more important that information with respect to student success in each of these situations be available to educators and members of the family law system.

The literature contains dire warnings about the consequences of the modern phenomenon of family disruption on student performance. This research does not support such conclusions. One fact that is often overlooked is that the idealized two-parent nuclear family existed for the majority of North Americans for very few years. In 1900, by age 15 almost 25% of all children had lost a parent due to death (Whitehead, 1993). It was only during the 1950's and early 1960's that most students graduated from high school in an intact two-natural-parent family. The parents of today's high school students are of the generation that grew up in ideal families, yet they are responsible for the high number of non-intact families. In this study, some students in intact families indicated that they considered their family to be unstable. Two students from intact families mentioned family conflict as a source of discouragement with their school work. It is possible that the quality of the relationship among the members of the student's family is more important than the presence or absence of particular family members. Kurdek and Sinclair (1988) found that family environment was more significant than family structure in predicting year end grades of grade eight students. Future work could further evaluate the relationship between the quality of students' familial relationships and academic success.

This study was conducted on a homogeneous population. As a result, it has direct application in other areas where such a population is found. It may also serve as a basis

for work in which the variables of race, culture, language and socioeconomic level are studied.

Implications for Education

The schools cannot prevent changes in the family. It is important that any difficulties arising from such change are not compounded within the school system.

The results of this research indicate that family status was not a significant factor in determining the academic achievement and program placement of the students in this study. If students are to be placed into streamed programs, the method of streaming which is currently in place appears to be adequate. Prior research supports the finding that students in higher streams achieve more (Gamoran, 1986). This is a pedagogical problem which the Ministry of Education in Ontario is attempting to address with the Transition Years Program.

Although family status does not appear to have a significant impact on program choice, and achievement within the chosen program, it cannot be assumed that changes in family status have no educational implications.

A large number of secondary school students do not have a male role model in their homes. This may well affect these students in more subtle ways than can be detected by the measures used in this research. It is important that the schools provide opportunities for students to develop relationships with adults of both genders. This is a factor which should be considered in staffing of schools.

The postal code data collected in this study indicate that the intact, single-parent and blended families all live in similar neighbourhoods. However, within all of these neighbourhoods, the women report earning significantly lower incomes than the men. It is therefore likely that the single mother families are less affluent than the other types of families. This would indicate that it is important for schools to emphasize to female students the need to prepare for the world of work, in order to minimize this effect for the next generation.

The results of this research indicate that family status alone does not have a significant impact on student achievement and program choice. There is no evidence that teachers should expect less of students from non-intact families than they do of students of intact families.

Limitations

There are several limitations to this study which must be considered. These include the response rate, the distribution of the participants by family type and the reliability of student responses to certain biographical questions.

The low response rate (36.5%) and resulting low number of students limits the strength of any conclusions which might be drawn from the data. A major cause of this low response rate was the need for a third party (parental) informed consent. It was not possible to determine whether the non-participants were excluded because they did not bother to return the consent form, or because their parents denied them permission to participate. It is possible that the parents who are most interested in their student' work were the ones who replied, potentially biasing the results.

The school does not maintain any records of the family status of its' students. As a result, it is not possible to be certain that the students who participated in the study were truly representative of the grade nine class with respect to family type. However, the proportions of participating students from intact (59%) and non-intact (41%) families were similar to those reported by Brown et al. (1992) in a major study of secondary students in Toronto. This indicates that the returned responses were not heavily weighted in favour of a particular family type.

The reliability of student reporting of information about their parents is somewhat suspect. A large number of students did not report the education or occupation of their parents. This was particularly true of the information provided about the male parent. This unreported data weakens the statistical significance of conclusions which might be drawn from the data. At the same time, the lack of knowledge about the male parent

strengthens the argument that interaction with the male parent may not be significant for many students who do have a male in the home, thus diminishing the differences between those students with and without a male parent.

APPENDIX A:

Student Survey

This survey is part of a research project which is investigating how the family can affect school work. Your parents have completed a letter of permission allowing you to participate in this study.

Once all of the information has been collected, this front page will be removed from the survey and destroyed. There will be no way for anyone to know who has completed the form.

You may omit questions you do not wish to answer .

Please PRINT neatly.

First Name _____

Last Name _____

Home Form _____

SECTION 1 - GENERAL INFORMATION

1. Home Postal Code ___ ___ ___ - ___ ___ ___

2. a. Your age _____

   b. Your sex Male_____ Female_____

3. Is this your first year of high school ? Yes _____ No _____

4. Is English the main language spoken in your home? Yes _____ No _____

5. Were you born in Canada? Yes _____ No _____

7. If you were born outside Canada.

   a) where were you born? _____

   b) How old were you when you came to Canada? _____

8. How many children live in your home? _____

9. Circle the number of hours per week you spend on :

a) homework?	0-2	3-5	6-8	9-11	>12
b) a paying job?	0-2	3-5	6-8	9-11	>12
c) school activities? (Sports, clubs, associations etc.)	0-2	3-5	6-8	9-11	>12

10. What do you plan to do when you finish high school ?

____ a) go directly to work

____ b) take training in a trade (e.g. machinist, hairdresser)

____ c) attend a community college (e.g. Lambton or Fanshawe)

____ d) attend university

____ e) not sure

____ f) other

SECTION 2 - THE ADULTS IN YOUR HOME

11. Do you consider yourself part of a stable family? Yes _____ No _____

12. Do you live with two parents who have both been part of your life for a significant length of time?
Yes _____ No _____

13. If you **do not** live with both of your natural parents, answer the parts of this question which apply to you:.

How old were you when you stopped living with:

a) your natural mother ?_____
b) your natural father ? _____

14. On the list below, circle the phrases which describe your parents or other adults you normally live with.

Adult Females	Adult Males
natural mother	natural father
adopted mother	adopted father
step-mother	step-father
fathers' girlfriend	mothers' boyfriend
foster mother	foster father
grandmother	grandfather
other female	other male
none	none

16. Fill in a column in the following chart for each person you circled in the list on page 2.

Example: if you circled step-father, then fill in a column for your step-father.

Person				
How long have you lived with this person?	__ 0-2 years __3-5 years __6-10 years __ >10 years __ all my life	__ 0-2 years __3-5 years __6-10 years __ >10 years __ all my life	__ 0-2 years __3-5 years __6-10 years __ >10 years __ all my life	__ 0-2 years __3-5 years __6-10 years __ >10 years __ all my life
What is the highest level of education this person has completed?	__ none __ elementary __ high school __ college __ university __ don't know	__ none __ elementary __ high school __ college __ university __ don't know	__ none __ elementary __ high school __ college __ university __ don't know	__ none __ elementary __ high school __ college __ university __ don't know
Does this person work outside the home?	__ no __ part-time __ full time __ usually, but unemployed right now	__ no __ part-time __ full time __ usually, but unemployed right now	__ no __ part-time __ full time __ usually, but unemployed right now	__ no __ part-time __ full time __ usually, but unemployed right now
What type of job does this person have? (See examples on next page)	__ clerical __ service __ labour __ trade/technical __ management __ professional __ self-employed __ farmer __ other	__ clerical __ service __ labour __ trade/technical __ management __ professional __ self-employed __ farmer __ other	__ clerical __ service __ labour __ trade/technical __ management __ professional __ self-employed __ farmer __ other	__ clerical __ service __ labour __ trade/technical __ management __ professional __ self-employed __ farmer __ other

Examples of jobs:

clerical:	secretary book-keeper shipper/receiver	trade/technical:	process operator mechanic welder pipe fitter nurse
service:	restaurant sales child care hairdresser	management:	foreman supervisor manager
labour:	gardener janitor snow-plow driver road builder	professional:	teacher engineer accountant dentist

APPENDIX B

Scripted Interview

" In March, you returned a consent form to the school. This allows you to participate in a research study. The questions I am about to ask you are part of this study. These questions are being asked to all grade nine students at the school. You are free to not answer any of these questions. The information I write down will be kept strictly confidential."

1. Is your school work important to your family?

2. Does anybody at home help you with your school work? Who? What do they do?

3. What is special about your family that encourages you to be a better student?

4. What is special about your family that discourages you from being a better student?

5. Who did you get help from when you made your choices for your grade 10 courses?

Date

Dear Parent or Guardian:

Over the course of this semester, School A will be the site of a research study. The purpose of this work is to identify some of the factors which may affect the academic achievement and choice of program of grade 9 students.

This study will involve all of the grade 9 students at School A who return the attached permission form. Students may choose participate in all or parts of the study. Information will be collected in three ways:

- Each student will be asked to complete a questionnaire. You may review the copy of this questionnaire which is on file in the school office. Students will be asked for information about themselves and their families.

- School records will be consulted in order to determine marks for each student in grade 9 science, math, geography, English and French.

- Students will be asked additional questions during their routine guidance interview this Spring. The counselors will identify questions which are part of this study, and will make it clear to the students that they may choose not to respond.

The results of this study will be used to help develop special programs for students, and to plan teacher training programs. All information will be kept strictly confidential. The section of the survey which contains identifying information (name, home form) will be removed form the rest of the survey so that anonymity is guaranteed. Participants and their parents may ask for a copy of the final research report in the office of the school in the Fall of 1993.

Your permission is needed in order for your student to participate in this study. Please respond by completing the attached form and returning it to the homeroom teacher. Thank you for your cooperation.

Mrs. L. Jared, Researcher Principal

Note: This study is being conducted by the researcher as part of the requirements for the degree of Master of Education at the University of Windsor. Any concerns may be directed to:
Dr. L. Morton, Chair, Faculty Ethics Committee, University of Windsor, (519) 253-4232 ex. 3838.

Research Study Participation Consent Form

Sign and return to homeroom teacher

I understand the information given in the attached letter, and agree that

_____

Name of Student

may participate in this research project.

_____ _____

Signature of Parent or Guardian Date

REFERENCES

Allison, P., & Furstenberg, F. (1989). How marital dissolution affects children: Variations by age and sex. Developmental Psychology, 25 (4), 540-549.

Barrington, D. (1985). An annotated bibliography of the literature dealing with the impact of divorce on the academic performance, emotional adjustment, self-concept, and behavioral changes of children of divorce and the diagnosis of and strategies for alleviating negative symptoms of divorce. South Bend: Indiana University, Exit Project. (ERIC Document Reproduction Service No. ED 258 724)

Boyd, D., & Parish, T. (1985). An examination of academic achievement in light of familial configuration. Education, 106 (2), 228-230.

Brown, R. S., Cheng, M., Yau, M., & Ziegler, S. (1992, May). The 1991 every secondary student survey: Initial findings (Report No. 200). Toronto, ONT: Toronto Board of Education Research Department.

Chalker, R., & Horns, V. (1988). Family status and school achievement. Paper presented at the annual meeting of the Mid-South Educational Research Association, Memphis, TN. (ERIC Document Reproduction Service No. ED 277 139)

Cheng, M., Tsuji, G., Yau, M., & Ziegler, S. (1989, June). The every secondary student survey, for 1987 (Report No. 191). Toronto, ONT: Toronto Board of Education Research Department.

Clarke-Stewart, A. (1989, January). Single parent families: How bad for the children? NEA Today, pp. 60-64.

Curtis, B., Livingstone, D. W., & Smaller, B. (1992). Stacking the deck: The streaming of working class kids in Ontario. Toronto, ONT: Our Schools/Our Selves Education Foundation.

Devereaux, M. S. (1990). Changes in living arrangements. In C. McKie & K. Thompson (Eds.), Canadian social trends (pp. 135-137). Toronto, ONT: Thompson Educational Publishing.

Frymier, J. (1992, November). Children who hurt, children who fail. Phi Delta Kappan. 257-259.

Gamoran, A. (1986). Instructional and institutional effects of ability grouping. Sociology of Education, 59 , 185-198.

Guidubaldi , J. , Perry, J., Cleminshaw, H., & Mcloughlin, C. (1983). The impact of parental divorce on children: Report of the nationwide NASP study. School Psychology Review, 12 (3), 300-323.

Hetherington, E. M. (1980). Coping with family transitions: Winners, losers and survivors. Child Development, 60 (1), 1-14.

King, A. J. C. (1986). The adolescent experience. Toronto ONT: Ontario Secondary School Teachers' Federation.

Kraig, G. (1989). A study comparing the difference in levels of achievement of tenth grade students in one and two parent homes. (ERIC Document Reproduction Service No. ED 310 339)

Kurdek, L., & Sinclair , R. (1988). Relation of eighth graders' family structure, gender and family environment with academic performance and school behavior. Journal of Educational Psychology, 80 (1), 90-94.

McCall, R. B. (1975). Fundamental statistics for psychology. New York, NY: Harcourt Brace Jovanovich.

McKie, C. (1993). An overview of lone parenthood in Canada. In J. Hudson & B. Galaway (Eds.), Single parent families: Perspectives on research and policy. (pp. 53-71). Toronto, ONT: Thompson Educational Publishing.

Milne, A., Meyers, D., Rosenthal, A., & Ginsburg, A. (1986). Single parents, working mothers, and the educational achievement of school children. Sociology of Education, 59 (July), 125-139.

Mulkey , L., & Morten, P. (1991). Sex differences in verbal and science performance for students from one-parent families: Further tests of economic and behavioral

explanations of a small effect. Paper presented at the 61st annual meeting of the Eastern Sociological Society, Providence, RI. (ERIC Document Reproduction Service No. ED 333 325)

Ontario Ministry of Education. (1989). Ontario schools: Intermediate and senior divisions program and diploma requirements. Toronto, ONT: Queen's Printer for Ontario.

Shreeve, W., Goetter, W., Norby, J., Bunn., A., Stueckle, A., deMichele, B., & Midgley, T. (1985). Single parents and student achievement: A national tragedy. (ERIC Document Reproduction Service No. ED 262 028)

Statistics Canada (1989). Demographic and income statistics for postal areas. Ottawa, ONT: Ministry of Supply and Services Canada.

Taylor, D. (1986). A comparison of the achievement levels of eighth graders from one parent families with those from two parent homes. (ERIC Document Reproduction Service No. ED 278 508)

Touliatos, J., Lindholm, B., & Rich, A. (1978). Influence of family background on scholastic achievement. Journal of Experimental Education, 46 (3), 22-27

Valpy, M. (1993 October 2) The 40% factor. The Globe and Mail, pp. D1, D5.

Whitehead, B. D. (1993, April). Dan Quayle was right. The Atlantic, 271 (4), pp. 47-84.

Wright, E., & Dhanota, A. (1981). The grade nine student survey: Fall 1980. Toronto, ONT: Toronto Board of Education Research Department.

VITA AUCTORIS

NAME:

Linda Jared

EDUCATION:

B. Sc., University of New Brunswick, Fredericton, New Brunswick (1982)

B. Ed., University of Western Ontario, London, Ontario (1988)

M. Ed., University of Windsor, Windsor, Ontario (1994)